

# Rhodora

JOURNAL OF THE  
NEW ENGLAND BOTANICAL CLUB.

Conducted and published for the Club, by

BENJAMIN LINCOLN ROBINSON Editor-in-chief.

FRANK SHIPLEY COLLINS

MERRITT LYNDON FERNALD

HOLLIS WEBSTER

} Associate Editors.

WILLIAM PENN RICH

EDWARD LOTHROP RAND

} Publication Committee.

Vol. 12.

December, 1910.

No. 144.

## CONTENTS:

Use of Corrugated Paper Boards in drying Plants.

*J. F. Collins* 221

*Erigeron acris* in northeastern America.

*M. L. Fernald & K. M. Wiegand* 225

William Gleason Goldsmith. *A. H. Moore* . . . . . 227

Affinities of a boreal *Galium*. *K. M. Wiegand* . . . . . 228

Errata . . . . . 230

Index . . . . . 231

Boston, Mass.

1052 Exchange Building.

Providence, R. I.

Preston and Rounds Co.

**RHODORA**.—A monthly journal of botany, devoted primarily to the flora of New England. Price \$1.00 per year (\$1.25 to all foreign countries including Canada); single copies 15 cents. Volume 1, \$2.00, Vol. 2, \$1.50. All remittances by check or draft, except on Boston or New York, must include ten cents additional for cost of collection. Notes and short scientific papers, relating directly or indirectly to the plants of the northeastern states, will be gladly received and published to the extent that the limited space of the journal permits. Forms will be closed five weeks in advance of publication. Authors (of more than one page of print) will receive 25 copies of the issue in which their contributions appear. Extracted reprints, if ordered in advance, will be furnished at cost.

Address manuscripts and proofs to

B. L. ROBINSON, 3 Clement Circle, Cambridge, Mass.

Subscriptions, advertisements, and business communications to

W. P. RICH, 300 Massachusetts Avenue, Boston, Mass.

Single copies may be had from

E. L. RAND, Corresponding Sec'y N. E. Botanical Club,  
1052 Exchange Building, Boston, Mass.

Entered at Boston, Mass., Post office as Second Class Mail Matter

---

**SYNOPTICAL FLORA OF NORTH AMERICA**, by A. GRAY and others. Vol. I. Fascicles 1 and 2. A critical treatment of forty-five families of polypetalæ (*Ranunculaceæ* to *Polygalaceæ*) 1895-1897. \$5.20.—GRAY HERBARIUM of Harvard University, Cambridge, Mass.

---

**KEY TO NEW ENGLAND TREES**, Wild and Commonly Cultivated, based primarily upon leaf characters, by J. FRANKLIN COLLINS and HOWARD W. PRESTON. Price 40c. net. PRESTON & ROUNDS Co., Providence, R. I.

---

**EMENDATIONS OF THE SEVENTH EDITION OF GRAY'S MANUAL, I.** Reprints of the article on "Emendations of the Seventh Edition of Gray's Manual, I," on paper of the size of Gray's Manual can be had on application to E. L. RAND, 1052 Exchange Building, Boston, Mass. Price 10 cents, postpaid.

---

**CHECK LIST OF GRAY'S MANUAL, 7th EDITION**, compiled by M. A. DAY. Leatherette. Pocket size. Invaluable for collectors' memoranda and herbarium records. Published and sold by the GRAY HERBARIUM, Cambridge, Mass. Price postpaid 20 cts. each. Ten copies \$1.50.

---

*Advertisements of Nurserymen and Dealers in Botanical and other Scientific Publications are inserted in these pages at the following rates per space of 4 in. by 3-4 in. 1 year \$4.00, 6 months \$2.50.*

# Rhodora

JOURNAL OF

THE NEW ENGLAND BOTANICAL CLUB

---

Vol. 12.

December, 1910.

No. 144.

---

## THE USE OF CORRUGATED PAPER BOARDS IN DRYING PLANTS.

J. FRANKLIN COLLINS.

At a recent meeting of the New England Botanical Club the writer spoke briefly of a method of drying plants that he had used during the preceding season under certain particularly adverse conditions. Considerable interest in the possibilities of the method was shown by the members present, and numerous questions of a practical nature were asked as to details and results. Partly because this method appears not to be generally known, and partly because it has certain commendable time- and labor-saving features that will appeal to all active collectors, as well as to those who have but little time for the work, the following account of it is here given.

During the discussion of the matter at the meeting the fact (previously unknown to the writer) developed that at least three other members of the Club had, within two years, been using a somewhat similar method (at least as to certain details) in their own field work. Since this meeting the writer has undertaken a few experiments to determine the practical value of certain theoretically interesting details that were brought out by the discussion mentioned. It is not the purpose to enter into details of these experiments, nor into unimportant features of the drying process, but merely to explain briefly its essential points. Any collector can easily modify or elaborate these to suit certain special conditions, or to please his own whims.

The special advantages of the new method, when compared with the old, that will appeal to all whose time is very limited, are (1) that



there is no necessity of changing driers, (2) that driers need not be spread out to dry, (3) that colors of flowers and foliage are more perfectly preserved, (4) that plants which formerly took a week to dry can almost invariably be perfectly dried in less than 24 hours, and commonly in less than 12 hours.

The contrasting disadvantages are so few and unimportant that they are hardly worth mentioning. It is argued that the rapid drying contributes to brittleness, that the corrugated boards make ridges on the plants, and that bulky specimens are not easily handled. Neither of the first two have been apparent to any very noticeable extent (certainly to no serious extent) in the writer's experience, and the last is one that exists under almost any generally known method of drying plants.

To one already outfitted with the presses, driers, etc., needed for drying plants by the usual method the added expense in adopting the new one need not necessarily exceed a dollar, for a press a foot in thickness.

Under the particularly adverse conditions mentioned in the opening sentence of this article no driers were obtainable, and only a few second-hand sheets of single-faced corrugated card board. These latter were cut into sheets of the proper size, care being taken to have all the grooves run in one direction (across the press). The plants were placed, in the usual manner, in specimen sheets cut from old newspapers; one of these was laid on a corrugated board and another similar board placed on top of it. In this manner the press was built up. Wooden boards of a convenient size were used for the sides. Heavy cords tightly drawn about the press furnished the only available means of applying the pressure, but it answered all practical purposes. In building up the press care was taken to have the smooth side of each corrugated board down (or vice versa), for if odd ones were reversed the corrugations of the two adjoining sheets would interlock and cause deep grooves in the specimen between them. This press was suspended by a wire in such a way as to have the grooves of the paper boards vertical, and the press about four or five feet from the floor. A piece of unbleached cotton sheeting was sewed up in such manner as to suggest, in size and appearance, a dress skirt. By means of a draw-string at the top of this cloth it was fastened tightly about the middle of the suspended press, the bottom (about a foot from the floor) being held open by means of a

stiff wire hoop sewed in at the lower edge. Under this an ordinary lamp with a single  $\frac{3}{8}$  inch wick was set on the floor and kept burning. This lamp heated the air confined under the press and inside the cloth, and drove it up through the grooves of the corrugated boards. The lamp consumed less than one cent's worth of oil in ten hours.

This is a brief description of the simple "make-shift" press that first demonstrated the advantages mentioned above. Since returning home the writer has tried certain modifications which show that somewhat better specimens can be obtained, though not so quickly dried, if the press is built up as follows; a corrugated board, a regulation drier, a specimen sheet with the inclosed plant, a drier, a corrugated board, and so on. Although the double-faced corrugated board (smooth on both surfaces) is better to handle, and can be used either side up, it appears doubtful at present if it has any particular advantages otherwise over the single-faced.

Professors M. L. Fernald and K. M. Wiegand have been using corrugated boards with excellent results for the past two seasons to ventilate their field presses. These boards were at first placed an inch or more apart in the press which was otherwise handled in much the manner that is familiar to most of us; but during the past season they were employed as described in the last paragraph, except that one change of driers was made in order to straighten folded leaves, etc. As a result Messrs. Fernald and Wiegand found it possible, in an unusually damp atmosphere, to leave their presses unattended after the first change of driers and to make prolonged collecting trips without fear that the plants left in press would be injured. Mr. J. H. Emerton has recently been using a press, with good results, in which corrugated boards and cotton wadding are the most conspicuous features. During the past summer Dr. H. S. Conard used a press very similar to the one described above in connection with his work at Cold Spring Harbor, N. Y. He spoke very enthusiastically of its merits, and some of his suggestions have been adopted here.

In all of these presses the one most important feature is the cheap and efficient ventilation furnished by the corrugated boards, thus allowing the easy and rapid dissipation of moisture, and at the same time precluding all danger of mildew or blackening under ordinary conditions. This statement also applies to presses used in foggy or humid regions. The nearer together in the press these ventilators are placed the more rapid will be the drying process, even if artificial



heat is not used. By applying artificial heat in some such manner as indicated above the drying process is greatly hastened. If one is unable to arrange the plants satisfactorily when they are first put into the press the latter can easily be left for half a day or more, and then opened and the plants rearranged finally, before artificial heat is applied.

Of the various forms or modifications of the corrugated paper board press that the writer has tried none has dried the plants so rapidly as the "emergency" press, without driers, described above. In actual use this press was almost always emptied each day and ready for the new lot of plants before they were ready for the press. It had the disadvantage, mentioned above, however, of not satisfactorily taking care of thick and bulky specimens, especially fern rootstocks, etc., unless a packing of paper, cotton wadding, or something of that sort, was used about the thick parts. This disadvantage is greatly reduced when the regular driers are used along with the corrugated sheets.

This type of press has already clearly demonstrated its great value as a time-saver not only for spermatophytes, but to an even greater extent for mosses, lichens, certain fungi, and, to a somewhat less extent, for algae and fleshy fungi. Soaking-wet sphagna have been completely dried in less than five hours, though these usually require six or more hours in the ventilated press.

More permanent and convenient, though less portable, modifications of the apparatus described above can easily be planned for home use, as has been done at the writer's home and at Brown University. At the former place a small oil stove and a wooden case are used in place of the lamp and cloth; at the latter a small electric heater, costing about \$4.00, which can be plugged into any incandescent lamp socket, is used to supply the heat. Other sources of heat may sometimes be utilized to advantage, for instance, a cook stove, a furnace register, a steam or hot water radiator, steam pipes, etc.

BROWN UNIVERSITY, Providence, Rhode Island.

THE REPRESENTATIVES OF *ERIGERON ACRIS* IN  
NORTHEASTERN AMERICA.

M. L. FERNALD and K. M. WIEGAND.

*Erigeron acris* L. is the type of a small group of plants which has one or more representatives in nearly all the boreal districts of the northern hemisphere. Until recently members of the group were unknown in New England and adjacent Canada, but we now know one of them as a frequent plant of clearings and open banks as far south as the Rangeley Lakes in western Maine, so near the New Hampshire border that the plant may be sought with confidence in northernmost New Hampshire; another representative of the series has long been known from Labrador but its identity not clearly made out, and this plant has recently been found in Quebec south of the St. Lawrence; and a third plant, of *Anticosti*, though represented in herbaria, has remained without definite identification until the present time. In studying these plants and their affinities the writers have found it convenient to draw up the following brief synopsis to cover the leading characters.

\* Cauline leaves lanceolate, with smooth or slightly ciliate margins, usually much exceeded by the peduncles or the branches of the inflorescence.

*E. ACRIS* L. Plant more or less hirsute: inflorescence racemose or paniculate, of numerous medium-sized heads (involucres 5–9 mm. high): involucre bracts very hirsute.—Sp. Pl. 863 (1753); Gray, Syn. Fl. i. pt. 2, 219 (1884), in great part.—Said by Dr. Gray to occur in Labrador, but seen by us only from Eurasia and the Rocky Mountain region. Represented in the East by

Var. *ASTEROIDES* (Andrz.) DC. Similar in habit, glabrous or only slightly hirsute: peduncles and involucre glandular-puberulent; involucre bracts at most a little hirsute at base.—Prodr. v. 290 (1836). Var. *droebachensis* Blytt, Norges Fl. i. 562 (1861); Gray, Syn. Fl. i. pt. 2, 220 (1884). *E. droebachensis* O. F. Muell. Fl. Dan. v. pl. 874 (1782). *E. asteroides* Andrz. ex Besser, Enum. Pl. Vohl. 33 (1821–22).—Recent clearings, open banks, etc., Gaspé County, Quebec, to Alaska, south to southern New Brunswick, northern Maine, northern Michigan, Colorado, Utah, and Oregon; also Eurasia. In the Northeast known as far south as the Kennebeckasis River, New Brunswick (Norton, coll. Hay), the Mattawamkeag River, Maine (Crystal, coll. Fernald), and the Rangeley Lakes, Maine (Kennebago Lake Trail, coll. Miss Furbish).



Var. **oligocephalus**, n. var., caulibus solitariis vel caespitosus 6-30 cm. altis hirsutis eglandulosus vel non evidenter glandulosus; capitulis subnutantibus demum erectis solitariis vel 2-8 laxe corymbosis, pedunculis plerumque elongatis valde ascendentibus; involucri 7-10 mm. longo, bracteis lineari-attenuatis appressis hirsutis; radiis lilacinis in siccitatis subcaeruleis discum paullo superantibus.

Stems solitary or tufted, 6-30 cm. high, hirsute, glandless or not obviously glandular: heads at first somewhat nodding, becoming erect, solitary or 2-8 in a loose corymb, the mostly elongate peduncles strongly ascending: involucre 7-10 mm. long; its appressed linear-attenuate bracts hirsute: rays lilac (drying bluish), slightly exceeding the disk.—Var. *debilis* Gray, Syn. Fl. i. pt. 2, 220 (1884) as to Labrador and Hudson Bay plants. *E. alpinus*  $\beta$  Hook. Fl. Bor.-Am. ii. 18 (1834). *E. elatus* Greene, Pittonia, iii. 164 (1897), not *E. alpinus*  $\gamma$  *elata* Hook. l. c.—Labrador to Mackenzie, south to Gaspé County, Quebec, and Alberta. Examined from the following stations. LABRADOR: near Okak (*Weiz*); wet calcareous-sandstone crests and slopes, Blanc Sablon, August 6, 1910 (*Fernald & Wiegand*, no. 4138, TYPE in Gray Herb.). HUDSON BAY (*Burke*). QUEBEC: gravelly banks of River Ste. Anne des Monts, July 16, 1906 (*Fernald & Collins*, no. 255). MACKENZIE, Fort Good Hope, July 12, 1892 (*Elizabeth Taylor*, no. 29). ALBERTA, above Laggan, July 13, 1904 (*John Macoun*, Herb. Geol. Surv. Can., no. 65,548).

The *Weiz* material from northeastern Labrador and the *Burke* specimens from Hudson Bay were included by Dr. Gray in var. *debilis*, but the more recent collections from southern Labrador and eastern Quebec show that the eastern material differs in several points from the northwestern specimens which were first cited and well characterized in the original description of var. *debilis*. In true var. *debilis* the heads are commonly smaller, the peduncles and involucre are obviously glandular-puberulent but scarcely hirsute, the involucreal bracts have somewhat squarrose tips, and the rays in dried specimens are roseate and conspicuously longer than the disks. As shown by an authentic specimen given by Hooker to Gray our plant is Hooker's *E. alpinus* " $\beta$ . foliis angustioribus, ramis elongatis" from the "Rocky Mountains in elevated situations."<sup>1</sup> Var. *oligocephalus* also matches very closely the description of *E. elatus* Greene, but it apparently is not *E. alpinus*  $\gamma$  *elata* Hook., from which variety Greene derives his specific name. Hooker's *E. alpinus*  $\gamma$  *elata* was very inadequately described, being distinguished from *E. alpinus* by the single word "subpedalis," but, whether or not its name can be con-

<sup>1</sup> Hook. Fl. Bor.-Am. ii. 18 (1834).



sidered much better than a *nomen nudum*, a specimen of it given by Hooker to Gray shows it to be a much more leafy plant than *E. acris*, var. *oligocephalus*, with the comparatively short-peduncled heads forming a racemose inflorescence as in true *E. acris* and the var. *asteroides*.

\* \* Cauline leaves elongate-linear, bristly-ciliate, usually equaling or exceeding all but the uppermost peduncles of the strict raceme.

*E. LONCHOPHYLLUS* Hook. Fl. Bor.-Am. ii. 18 (1834). *E. armeriaefolius* Turcz. in DC. Prodr. v. 291 (1836). *E. armeriaefolius* Gray, Proc. Am. Acad. viii. 648 (1873), Syn. Fl. i. pt. 2, 220 (1884). *E. racemosus* Nutt. Trans. Am. Phil. Soc. vii. 312 (1841).—A characteristic plant in saline meadows from the Black Hills and the Saskatchewan Plains westward across the Rocky Mountain region: also in northern Asia. The only eastern material seen by us is from Anticosti (coll. Verrill). This specimen was on a sheet in the Gray Herbarium with other material and seems to have formed the basis for Dr. Gray's record in the Synoptical Flora of *E. acris* (true) from Anticosti.<sup>1</sup>

### WILLIAM GLEASON GOLDSMITH.

October 7, 1910,<sup>2</sup> passed away at his home in Andover, Mass., William Gleason Goldsmith, a very versatile and gifted man. Born in Andover, November 28, 1832, the eldest son of Jeremiah Goldsmith and Elizabeth Gleason—he was trained for college at Phillips Academy. After the usual four years course at Harvard, he graduated with high honors in 1857, ranking especially high as a Greek scholar. While there he studied botany with Prof. Gray and also studied anatomy. During the year 1858, he read law with Squire Hazen, until he was called to accept the position of Principal of Punchard Free School, which he held from 1858–1886. During a brief inter-

<sup>1</sup> The occurrence of *E. lonchophyllus*, a typical plant of saline habitats in the Rocky Mountain region, at an isolated station near the mouth of the St. Lawrence calls to mind the similar occurrence of *Aster angustus* T. & G., which grows in "wet saline soil" (Nelson) in the Rocky Mountain area, at a single station on the lower St. Lawrence (Cacouna, where it grows at the margin of the salt marsh); and a station of the similar *Aster frondosus* T. & G. on salt marshes at Brackley Point, Prince Edward Island, though otherwise known only on saline spots from Wyoming and Colorado to the Sierra Nevada.

<sup>2</sup> For the dates in this notice I am indebted to the issue of the Andover Townsman for Friday, October 14, 1910.

ruption in these duties, resulting from a fire which destroyed the school, he was Peabody Instructor of Natural Sciences at Phillips Academy. After Dr. Taylor's death he finished a period as Principal of the Academy. Under Cleveland's administration he accepted the position of postmaster of Andover, which he filled with preeminent ability from 1886-1895. From 1898-1901 he was Chairman of the Board of Selectmen, a calling to which he devoted his usual zeal and talent. He made two trips to Europe for study and travel, and one to Colorado, where he was much interested in the flora.

But I wished, especially, to say a word concerning Mr. Goldsmith as a student of nature and a teacher. He was one of those humbler men of science, who, though not widely heralded, because they are not known by collections or writings, are none the less worthy to be remembered. He was one of the old type of local naturalist, which is becoming only too scarce. A keen observer — an enthusiastic student — widely read — he was well equipped as a teacher. Endowed with a charming manner and a quiet but irresistible enthusiasm, he could not but inspire those who were fortunate enough to be his pupils with a love for their study and their master. His loyal and admiring students hope to live to do honor to his name and to the thoroughness of his early training. I want also to take this opportunity of acknowledging my debt of gratitude to him. Although long interested in botany, it was primarily to Mr. Goldsmith that I owe my choice of it as a profession.— ALBERT HANFORD MOORE, Washington, D. C.

## THE AFFINITIES OF A CERTAIN BOREAL VARIETY OF GALIUM.

K. M. WIEGAND.

IN connection with a study of *Galium trifidum* and its allies the writer published in 1897<sup>1</sup> the variety *Galium trifidum*, var. *subbiflorum* based upon material collected in Colorado by Hall and Harbour (no. 230). The range was given as "Arizona and California to Oregon and the Saskatchewan," and material was then at hand from Arizona,

<sup>1</sup> Wiegand, K. M.— *Galium trifidum* and its North American Allies, Bull. Torr. Bot. Club, vol. 24, pp. 389-403. (1897).



Utah, California, Oregon, Colorado, Wyoming, and Saskatchewan. The variety was described as being somewhat stouter and with less scabrous stems than the typical form; with larger leaves; pedicels variable in stoutness, rarely two- or even three-flowered, and nearly glabrous; and the following note was added: "This variety approaches *G. Claytoni* and *G. Brandegeei*." On another page (p. 391) of the same paper the following statement was made; "It has affinities on the one hand with *G. Claytoni*, and on the other in its smaller forms with *G. Brandegeei*."

During the past summer the writer, in company with Prof. M. L. Fernald, obtained some interesting material of *Galium* in Labrador and Newfoundland which has led to a rather extended study of the material in the Gray Herbarium and the Herbarium of the New England Botanical Club of *Galium trifidum*, *G. trifidum*, var. *subbiflorum*, and *G. Claytoni* as well as other closely related species and varieties. As a result we both now believe that the var. *subbiflorum* is much more closely related to *G. Claytoni* than to *G. trifidum*, and that, although the variety is intermediate in appearance between these two species, an error in judgment was made in connecting it with *G. trifidum*. In addition, many sheets were found in the Gray Herbarium from various portions of northeastern America which were labeled *G. Claytoni* but which it was impossible to distinguish from the *G. trifidum*, var. *subbiflorum* of the Rocky Mountains. On the other hand, all gradations were found in the Northeast between this form and the true *G. Claytoni*. As a result we are both now convinced that unquestionably the var. *subbiflorum* is more closely related to *G. Claytoni* and should be transferred to that species and that the range should be extended to include the northeastern specimens mentioned, as follows:—

*GALIUM CLAYTONI* Michx., var. ***subbiflorum***, n. comb.—*G. trifidum* L., var. *subbiflorum* Wiegand, Bull. Torr. Bot. Club, vol. 24, p. 399 (1897).

This variety differs from the typical form principally in the arrangement of the flowers, some of which are borne singly on straight or arcuate, axillary, less stout, often very slightly prickly peduncles of varying length, while other similar peduncles bear two or even three flowers on short ascending pedicels. In the typical *G. Claytoni* the majority of the flowers are borne on stout, straight, glabrous, widely spreading or reflexed occasionally once-forked pedicels in three-rayed bracteate umbels.

As at present understood the range of the var. *subbiflorum* is from

Labrador and Newfoundland to Maine; Michigan; the Rocky Mountains; and the Pacific Coast states.

Some typical eastern specimens are: — LABRADOR: Blanc Sablon, July 30, 1910, *Fernald & Wiegand*, no. 4040. NEWFOUNDLAND: Birchy Cove, July 22, 1910, *Fernald & Wiegand*, no. 4039. QUEBEC: Vicinity of Cap à l'Aigle, July 22, 1905, *J. Macoun*, no. 68144; in sphagnum, Table-top Mountain, Gaspé County, Aug. 5, 1906, *Fernald & Collins*, nos. 722, 723; alluvium of Nouvelle River, Nouvelle, Bonaventure Co., July 19 and 20, 1904, *Fernald & Collins*. NEW BRUNSWICK: Brackish marsh, Bathurst, July 24, 1902, *Williams & Fernald*. NOVA SCOTIA: pebbly lake shore, North Sydney, Cape Breton Island, July 21–25, 1901, *Howe & Lang*, no. 752. MAINE: Mt. Desert Island, July 12, 1897, *E. F. Williams*. MICHIGAN: Isle Royale, July and August, 1909, *W. S. Cooper*, nos. 18, 19, 20; Turin, Marquette Co., June 21, 1901, *B. Barlow*.

One result of this study is to emphasize more than ever the distinctness of *G. trifidum* from all of its near relatives. The variety here under discussion has long been a source of confusion, but the discovery of many transitions to *G. Claytoni* rather than to *G. trifidum* makes its position quite clear.

WELLESLEY COLLEGE.

## ERRATA.

- Page 28, line 12; *for ton read tun.*  
 “ 38, “ 1; omit the comma after those.  
 “ 66, “ 2, 3; *omit* by the Vienna Rules.  
 “ 66, “ 4; *for for us read* by the Vienna Rules.  
 “ 67, “ 38; *after Collect insert* a period.  
 “ 85, “ 42; *for COMGLOMERATUS read CONGLOMERATUS.*  
 “ 86, “ 33; *for Buchanan read* Buchenau.  
 “ 96, “ 31; *for Leharpe read* Laharpe.  
 “ 98, “ 3; *for T. read* J.  
 “ 103, “ 30; *for Euphasia read* Euphrasia.  
 “ 140, “ 21; *for SERYPLIFOLIA read* SERPYLLIFOLIA.  
 “ 160, “ 17; *for of read* for.  
 “ 170, “ 15; *for Grey read* Gray.  
 “ 186, “ 9; *for lanceolatus, read* lanceolata.

*Vol. 12, no. 143, including pages 209 to 220, was issued 9 December, 1910.*



# INDEX TO VOLUME 12.

New scientific names are printed in full face type.

- Abele, 178.  
 Abies, 177; balsamea, 103, 177, var. *phanerolepis*, 103.  
 Acacia, False, 181.  
 Acer, 182; pennsylvanicum, 182; platanoides, 30, 32; rubrum, 128, 182, var. *tridens*, 110, 140; saccharum, 128, 182, *spicatum*, 37, 182.  
 Aceraceae, 182.  
 Acorus, 5; Calamus, 5.  
 Actaea rubra, 128.  
 Additions to the Rhode Island Flora, 216.  
 Aesculus Hippocastanum, 32.  
 Affinities of a certain boreal Variety of Galium, 228.  
 Agastache scrophulariaefolia, 192.  
 Agrimonia Brittoniana, 16; gryposepala, 113, 140; mollis, 189.  
 Agropyrum caninum, 70.  
 Agropyron, 26, 27, 61; andinum, 75; biflorum, 65, 74, subsp. *andinum*, 75; brevifolium, 66, 74; caninum, 26, 27, 61-64, 68, 69, and its North American Allies, 61, var. **andinum**, 69, 75, forma **glaucum**, 69, 71; var. **Gmelini**, 69, 75, var. **Gmelini**, forma **Pringlei**, 69, 76, 206, var. **Hornemanni**, 69, 73, var. *Hornemanni*, forma **pilosifolium**, 69, 75, var. **latiglume**, 69, 73, var. *Pringlei*, 76, forma **pubescens**, 69, 71, var. *pubescens*, 71, var. **tenerum**, 69, 71, var. *tenerum*, forma **ciliatum**, 69, 72, var. *tenerum*, forma **Fernaldii**, 69, 73, var. *unilaterale*, 67-69, 76, var. *unilaterale*, forma **ciliatum**, 69, 76, forma *violascens*, 76, *caninoides*, 70; *Gmelini*, 66, 75, var. *Pringlei*, 66, 67, 76, 206; Notes on, 205; Novae-Angliae, 63, 71; *pungens*, 26; *repens*, 27, 62, 63, var. *tenerum*, 62, 71; *Richardsoni*, 62, 67, 68, 76, var. *ciliatum*, 77; *Scribneri*, 66, 76, 205, 206; *tenerum*, 26, 61, 63, 66, 68, 71, 205, var. *ciliatum*, 73, var. *longifolium*, 68, 205, subsp. *trichocoleum*, 73; *unilaterale*, 67, 76; *violascens*, 76; *violaceum*, 26, 27, 61-66, 68, 74, var. *andinum*, 61, 62, 75, forma *caninoides*, 68, var. *caninoides*, 70, var. *genuina*, 74, subsp. *latiglume*, 73, var. *latiglume*, 61, 62, 64, 73, var. *major*, 74, forma *violascens*, 68, forma *virescens*, 74, var. *virescens*, 64, 74; *violascens*, 76; *virescens*, 62.  
 Agropyrum caninum, var. *Gmelini*, 66, 75.  
 Agrostis, 28, 29.  
 Ailanthus glandulosa, 9.  
 Alder, Black, 181; Downy Green, 178; Hoary, 178; Speckled, 178.  
 Alektorolophus minor, var. *fallax*, 143, var. *vittulatus*, 143.  
 Alexandrina, 23.  
 Alisma, 3; Plantago-aquatica, 3.  
 Alismaceae, 3.  
 Allium Schoenoprasum, var. *sibiricum*, 112.  
 Alnus, 178; *incana*, 128, 178; *mollis*, 103, 175, 178; *rugosa*, 128; *viridis*, 175, 178.  
 Alopecurus geniculatus, 104, 135.  
 Alsine, 160; *marginata*, 161; *marina*, 160, 161; *media*, 160, 162.  
 Alternate-leaved Dogwood, 182.  
 Ambrosia trifida, var. *integrifolia*, 111.  
 Amelanchier, 180; *canadensis*, 109, 128, 180, var. *tomentula*, 108, 139; *oblongifolia*, 128, var. *micropetala*, 128; *oligocarpa*, 105, 176, 180; *spicata*, 114.  
 America, The Representatives of *Erigeron acris* in northeastern, 225; Two new Galiums from northeastern, 77; The Variations of *Lonicera caerulea* in eastern, 209; A Variety of *Solanum* new to, 40.  
 American Aspen, 178; Cranberry, 183; Elm, 179; Fly Honeysuckle, 184; Larch, 177; Mountain Ash, 179; White Weed, 15; Wild Rice, 25; Yew, 176.  
 Ammophila arenaria, 26, 28, 30.

- Amphicarpa Pitcheri, 192.  
 Anacardiaceae, 181.  
 Andrews, L. [Notice of Work], 131.  
 Andromeda glaucophylla, 119, 129, 156.  
 Anemone canadensis, 112; multifida, 114; quinquefolia, 128.  
 Anemonella thalioides, 128.  
 Antennaria canadensis, 129; neglecta, 129; neodioica, 129; Parlinii, 108, 129; plantaginifolia, 129.  
 Anthoceros Macounii, 204.  
 Apgar, A. C. [Notice of Work], 207.  
 Aphanorrhagma, 151; serratum, 151.  
 Aplopappus, 14.  
 Apocynum cannabinum, var. pubescens, 217.  
 Apple, 179; Baked, 109.  
 Aquifoliaceae, 181.  
 Aquilegia canadensis, 128.  
 Arabis Drummondii, 168; hirsuta, 114.  
 Araceae, 5, 47.  
 Aralia nudicaulis, var. elongata, 39.  
 Arbor Vitae, 117, 177.  
 Arceuthobium, 14.  
 Arctium, 46; Bardana, 45; in North America, Synopsis of the Species of, 43; intermedium, 45, 46; Lappa, 43-45, var. majus, 44, var. minus, 47, var. **purpurascens**, 45, var. tomentosum, 45; majus, 44, subsp. nemorosum, 45; majus  $\times$  minus, 46; minus, 43, 44, 46, 47, forma laciniatum, 43, var. purpurascens, 46; nemorosum, 44-46; pubens, 45, 46; tomentosum, 43-45.  
 Arctostaphylos Uva-Ursi, 129.  
 Arenaria, 158; canadensis, 161; marginata, 160, 161; marina, 158, 161, 162; media, 159-161; rubra, 157, 161, var. marina, 158, 159, 161, 162; stricta, 168.  
 Arethusa bulbosa, 118, 119.  
 Arisaema, 5; Dracontium, 169; triphyllum, 5, 128.  
 Arnica mollis, var. petiolaris, 114, 145.  
 Artemisia Absinthium, 191; frigida, 111, 144; ludoviciana, 111, 144; pontica, 144.  
 Arum maculatum, 48, 49; virginicum, 48, 49.  
 Arundo arenaria, 28-30, 36.  
 Asclepias quadrifolia, 168.  
 Ash, American Mountain, 179; Black, 184; White, 184.  
 Aspen, 32; American, 178; Large-toothed, 178.  
 Aspidium, 207; Filix-mas, 207; Filix-mas  $\times$  marginale, 207; fragrans, 114.  
 Aster, 14; angustus, 227; frondosus, 227; junceus, 112; Lindleyanus, 103; macrophyllus, var. sejunctus, 112; radula, var. strictus, 106, 107, 144; salicifolius, 192.  
 Astragalus, 14; alpinus, var. Brunetianus, 112; eucosmus, 113, 114.  
 Atriplex patula, var. hastata, 109.  
 Aulacommium androgynum, 151, 152; palustre, 152.  
 Baked Apple, 109.  
 Balm of Gilead, 178.  
 Balsam Fir, 177; Poplar, 178.  
 Barbarea vulgaris, 128.  
 Bartlett, H. H., The North American Species of Panicum, 218; Vernonia georgiana, a new Species related to V. oligophylla, 171.  
 Bayberry, 178.  
 Beech, 178.  
 Bent-grass, 28, 29.  
 Benzoin aestivale, 128.  
 Berberis vulgaris, 128.  
 Berteroa mutabilis, 189.  
 Betula, 31, 178; alba, 37, 38, var. papyrifera, 178; papyrifera, 37, 38, pendula, 31; populifolia, 128, 178; pumila, 117; verrucosa, 31.  
 Betulaceae, 178.  
 Bidens, 120; hyperborea, 120, 144.  
 Birch, 30-32; Canoe, 37; Gray, 178; Paper, 178; White, 37, 178.  
 Bird Cherry, 181.  
 Bissell, C. H., The North American Variations of Lycopodium clavatum, 50; [Notice of Work], 131.  
 Bistorta, 15.  
 Black Alder, 181; Ash, 184; Blueberry, Low, 183; Cherry, Wild, 180; Chokeberry, 179; Crowberry, 181; Currant, 21, 22, 25, 32, 34, 179; Huckleberry, 183; Spruce, 177; Willow, 177.  
 Blackberries, 119.  
 Blackberry, Mountain, 180; Running Swamp, 180.  
 Bláhveite, 27.  
 Blake, S. F., Botrychium obliquum, var. oneidense in eastern Massachusetts, 80; Note on Juniperus horizontalis and J. virginiana, 218.  
 Blue Wheat, 27.



- Blueberries, 109.  
 Blueberry, Early Sweet, 183; High, 183; Low Black, 183; Low Sweet, 183; Sour-top, 183; Swamp, 183; Velvet-leaf, 183.  
 Boehmeria, 10; *cylindrica*, 10, 11, var. *Drummondiana*, 10, 11, Note on, 10, var. *scabra*, 10, 11; *Drummondiana*, 10, 11; *scabra*, 10, 11.  
 Bog Cranberry, 35.  
 Boston District, Reports on the Flora of the,—VI, 3, VII, 95.  
 Botanical Club, Notes from the phaenogamic Herbarium of the New England,—I, 185; The sixteenth annual field Meeting of the Vermont, 206; The winter Meeting of the Vermont, 100.  
 Botanical Society of Maine, Annual Meeting, The Josselyn, 99.  
 Botanizing in eastern Maine and Western New Brunswick, A summer's, 101, 133.  
 Botany of the Central Rocky Mountains, Coulter and Nelson's, 13.  
 Botrychium obliquum, var. *oneidense*, 80, in eastern Massachusetts, 80.  
 Braconnotia elymoides, 70.  
 Braconnotia elymoides, 70.  
 Brassica alba, 104, 139; *arvensis*, 16.  
 Brickellia albicaulis, 15; *humilis*, 15; *scaber*, 15; *umbellatus*, 15.  
 Bromus altissimus, 111, 135, 185; *ciliatus*, 185; *Kalmii*, 185; *purgans*, 185.  
 Brooklin, Maine, Woody Plants of, 173.  
 Broom Crowberry, 181.  
 Buda borealis, 161; *marina*, var. *minor*, 163.  
 Burdocks, 43.  
 Bush Honeysuckle, 184.  
 Caesalpineae, 16.  
 Caladium virginicum, 49.  
 Calamagrostis neglecta, 110, 112.  
 Calla, 5; *palustris*, 5; *virginica*, 49.  
 Calladium sagittae-folium, 48; *virginicum*, 48.  
 Caltha palustris, 128.  
 Camelina microcarpa, 169.  
 Campanula aparinoides, 192; *uliginosa*, 192.  
 Canoe Birch, 37.  
 Cape Cod; supplementary Note, Flora of Lower, 8.  
 Capillaire, 183.  
 Caprifoliaceae, 184.  
 Caprifolium proliferum, 166, 167; *Sullivantii*, 167.  
 Capsella Bursa-pastoris, 128.  
 Carduus acanthoides, 217.  
 Carex, 115, 124-126; *acutiformis*, 188; *aenea*, 103, 186; *aestivalis*, 187; *albolutescens*, 108; *aquatilis*, 187, var. *cuspidata*, 136; *arcta*, 136; *aurea*, 115; *canescens*, 136, var. *disjuncta*, 136; *canescens* × *norvegica*, 136; *chordorhiza*, 108, 117; *communis*, 128; *Crawei*, 112; *crinita*, var. *simulans*, 187; *debilis*, var. *Rudgei*, 125; *deflexa*, 126; *diandra*, 118; *digitalis*, 188; *eburnea*, 114; *exilis*, 118, 119; *flava*, 126, var. *gaspensis*, 115, 116, 136; *gracillima*, 126, 187; *gynocrates*, 118; *helvola*, 136; *hirta*, 188; *Houghtonii*, 103; *intumescens*, 126, var. *Fernaldii*, 188; *lanuginosa*, 126; *laxiflora*, var. *leptonervia*, 188; *livida*, 116, 117, 187; *lupulina*, 126; *maritima*, var. *erectiuscula*, 136; *norvegica*, 107, 136; *pauciflora*, 106; *pennsylvanica*, 128, var. *lucorum*, 108, 136; *plantaginea*, 188; *Pseudo-Cyperus*, 188; *pubescens*, 126; *salina*, 107, 136, var. *cuspidata*, 107, var. *fuliginea*, 107; *scirpoidea*, 112; *scoparia*, 126, 135, var. **tessellata**, 135; *sparganioides*, 170; *stricta*, 127, 132; *torta*, 187; *triceps*, 126; *trisperma*, var. *Billingsii*, 186; Two new species of *Uromyces* on, 124; *umbellata*, 128, var. *tonsa*, 108; *utriculata*, 126, 127; *vaginata*, 107, 116-118, 136; *varia*, 128; *virescens*, var. *Swanii*, 187; *Willdenowii*, 187.  
 Carices, 132.  
 Carpinus caroliniana, 128.  
 Carum Carvi, 104.  
 Castilleja pallida, var. *septentrionalis*, 112.  
 Cat Spruce, 177.  
 Catchfly, Sleepy, 129.  
 Caulophyllum thalictroides, 187.  
 Ceanothus ovatus, 187.  
 Cephalanthus occidentalis, 108.  
 Cephalozia connivens, 204; *fluitans*, 204; *pleniceps*, 204; *striatula*, 203.  
 Cephalozia elachista, 203, 204.  
 Cerastium semidecandrum, 217; *vulgatum*, 128.  
 Chaenactis scaposa, 16.

- Chamaedaphne*, 183; *calyculata*, 129, 183.  
 Chamberlain, E. B., The Josselyn Botanical Society of Maine, Annual Meeting, 99.  
 Chase, A. [Notice of Work], 218.  
 Checkerberry, 183.  
*Chelidonium majus*, 104.  
*Chenopodina Moquini*, 16.  
*Chenopodium album*, 109.  
 Cherry, 32; Bird, 181; Choke, 181; Sweet, 181; Wild Black, 180; Wild Red, 181.  
 Chestnut, Horse, 32.  
 Chicken-toes, 132.  
*Chiloscyphus*, 201; *pallascens*, 201; *polyanthus*, 201.  
*Chiogenes*, 183; *hispidula*, 183.  
 Choke Cherry, 181.  
 Chokeberry, Black, 179; Red, 179.  
*Chrysanthemum Leucanthemum*, 15.  
*Chrysosplenium americanum*, 128.  
*Chrysothamnus*, 16.  
 Cinnamon, Rose, 180.  
 Cinquefoil, Three-toothed, 180.  
*Cirsium Hillii*, 211-213; *muticum*, 111; *Pitcheri*, 212; *pumilum*, 211-213.  
*Cladophora expansa*, 9.  
 Clammy Locust, 181.  
*Claytonia caroliniana*, 128; *Chamissonis*, var. *tenerrima*, 138; *Hallii*, 138.  
*Clematis verticillaris*, 169.  
 Club, Notes from the phaenogamic Herbarium of the New England Botanical,—I, 185; The sixteenth annual field Meeting of the Vermont Botanical, 206; The winter Meeting of the Vermont Botanical, 100.  
 Clute, W. N. [Notice of Work], 56.  
*Coelopleurum actaeifolium*, 105.  
*Colchicum autumnale*, 188.  
 Collins, F. S., Flora of lower Cape Cod; supplementary Note, 8; A Variety of *Solanum* new to America, 40.  
 Collins, J. F., *Sclerolepis uniflora* in Rhode Island, 13; The Use of corrugated paper Boards in drying Plants, 221.  
*Collinsonia canadensis*, 192.  
 Columbine, 168.  
*Comandra livida*, 106, 107, 137; *umbellata*, 128.  
*Commelina*, 7; *communis*, 7.  
 Commelinaceae, 7.  
 Common Elder, 184; Lilac, 184; Locust, 181.  
 Connecticut, Flowering Plants and Ferns of, 131; Mosses, Notes on, 146.  
 Conrad's Crowberry, 181.  
 Coos County, New Hampshire, A fourth *Pinus rigida* for, 99.  
*Coptis trifolia*, 128.  
*Corallorrhiza odontorhiza*, 132.  
 Corema, 181; *Conradii*, 181.  
 Corinth Tree, 23.  
 Corn, 28; Indian, 17, 25, 26, 37, 38.  
 Cornaceae, 182.  
*Cornus*, 14, 121, 122, 182; *alternifolia*, 182; *Amomum*, 108, 122; *Arnoldiana*, 122; *candidissima*, 122; *circinata*, 122; *florida*, 129; *obliqua*, 122; *paniculata*, 122; *Purpusi*, 122; *racemosa*, 122; *rugosa*, 122, 123; *rugosa* × *stolonifera*, 122, A new hybrid *Cornus*, 121; **Slavinii** 122; *stolonifera*, 121-123.  
*Corylus americana*, 128; *rostrata*, 128.  
 Coulter, J. M. [Notice of Work], 13.  
 Coulter & Nelson's Botany of the Central Rocky Mountains, 13.  
 Covillea, 14.  
 Cowberry, 23, 35.  
 Crakebesien, 23.  
 Cranberry, 35; American, 183; Bog, 35; Large, 183; Mountain, 23, 25, 34, 35, 37, 183; Rock, 23, 25, 34, 35, 183; Small, 183.  
*Crataegus*, 94, 103, 110, 114, 180; *coccinea*, 93; *columbiana*, var. *Brunetiana*, 139; *Jonesae*, 139; *macracantha*, 180; *viridis*, 93, 94, in Virginia, 93.  
 Crawley Root, 132.  
 Creeping Snowberry, 183; Winter-green, 183.  
 Crowberry, Black, 181; Broom, 181; Conrad's, 181.  
 Crowfoot, Water, 108.  
 Cur Wheat, 27.  
 Currans, 20.  
 Currant, 20, 22, 25, 36; Black, 21, 22, 25, 32, 34, 179; Red, 21, 22, 25, 32; Skunk, 33, 179.  
 Currants, 21, 32, 35, 37; Red, 33.  
 Cushman, J. A., Reports on the Flora of the Boston District, —VI, 3, VII, 95.  
*Cynoglossum boreale*, 113.  
 Cyperaceae, 62, 155.  
*Cyperus aristatus*, 39; *Nuttallii*, 120.



- Cypress Spurge, 58.  
*Cypripedium hirsutum*, 116, 117;  
     *parviflorum*, 117, 118.  
*Cystopteris bulbifera*, 170.  
  
*Daucus Carota*, 104.  
 Deane, W., *Euphorbia Cyperissias*  
     in Fruit, 57; A fourth *Pinus*  
     *rigida* for Coos County, New  
     Hampshire, 99; Note on *Des-*  
     *modium canescens* and *Hyoscy-*  
     *amus niger*, 214; *Pogonia triantho-*  
     *phora* in Holderness, New Hamp-  
     shire, 206; Reports on the Flora  
     of the Boston District,—VI, 3,  
     VII, 95; Some Facts relating to  
     *Silene antirrhina*, 129; Teratology  
     in *Trillium*, 163; *Zannichellia*  
     *palustris*, an additional Record, 12.  
*Decodon verticillatus*, 156.  
 Deerberry, 168.  
*Desmodium canescens*, 190, 215, and  
     *Hyoscyamus niger*, Note on, 214;  
     *Dillenii*, 215; *marilandicum*, 215;  
     *paniculatum*, 215; *rigidum*, 215;  
     *rotundifolium*, 215.  
*Diastoloba*, 203.  
*Dichantheium*, 219.  
*Diervilla*, 184; *Lonicera*, 184.  
*Digitaria sanguinalis*, 104.  
*Diplophylla apiculata*, 203.  
 Dobbin, F., *Tetraplodon australis* in  
     Massachusetts, 156.  
 Dock, 104.  
 Dog Wheat, 27.  
 Dogwood, Alternate-leaved, 182.  
*Dondia Moquina*, 16.  
 Downy Green Alder, 178.  
*Draba verna*, 128.  
 Dragon's Claws, 132.  
*Drepanocladus* 154; *aduncus*, 153,  
     154; *subaduncus*, 153, 154.  
*Drosera anglica*, 117; *linearis*, 116,  
     117, 119.  
  
 Eames, A. J., Two Plants new to  
     Massachusetts, 204.  
 Eames, E. H. [Notice of Work], 131.  
 Early Sweet Blueberry, 183.  
*Echinodorus*, 3, *tenellus*, 3.  
 Eggleston, W. W., *Crataegus viridis*  
     L., in Virginia, 93.  
 Elder, Common, 184; Red-berried,  
     184.  
*Eleocharis Engelmanni*, var. *detonsa*,  
     155; *intermedia*, var. *Habereri*,  
     155; *olivacea*, 120; *palustris*,  
     var. *calva*, 155; *rostellata*, 120,  
     135.  
*Elephantopus*, 171; *carolinianus*, 171;  
     *nudatus*, 171; *tomentosus*, 171.  
 Elm, American, 179.  
*Elodea*, 4; *canadensis*, 4.  
*Elsholtzia Patrini*, 117, 142.  
*Elymus arenarius*, 26-30, 36, 38;  
     *canadensis*, 26; *caninus*, 63, 70;  
     *mollis*, 26; *virginicus*, 26, var.  
     *submuticus*, 186, 192.  
*Empetraceae*, 181.  
*Empetrum*, 106, 181; *nigrum*, 105,  
     106, 181.  
*Encelia nutans*, 16.  
*Enteromorpha*, 9.  
*Ephemereae*, 146, 147, 149.  
*Ephemerum*, 147, 148, 150; *co-*  
     *haerens*, 147, 149, 150; *crassi-*  
     *nervium*, 149, 150; *hystrix*, 149;  
     *megalosporum*, 149, 150; *papil-*  
     *losum*, 149, 150; *serratum*, 148-  
     150; *sessile*, 149; *spinulosum*,  
     147-150.  
*Epigaea repens*, 129.  
*Equisetum*, 170; *pratense*, 113; *scir-*  
     *poides*, 170; *variegatum*, 112.  
*Eragrostis*, 40; *capillaris*, 40.  
*Ericaceae*, 182.  
*Erigeron acris*, 225, 227, in north-  
     eastern America, The Representa-  
     tives, of, 225, var. *asteroides*, 225,  
     227, var. *debilis*, 226, var. *droe-*  
     *bachensis*, 225, var. **oligocephalus**,  
     226, 227; *alpinus*, 226, var. *elata*,  
     226; *armeriaefolius*, 227; *armeri-*  
     *folius*, 227; *asteroides*, 225; *droe-*  
     *bachensis*, 225; *elatus*, 226; *hyssop-*  
     *ifolius*, 114; *lonchophyllus*, 227;  
     *racemosus*, 227.  
*Eriocaulaceae*, 6.  
*Eriocaulon*, 6; *septangulare*, 6.  
*Eriophorum angustifolium*, 103; *cal-*  
     *litrix*, 119, 127; *gracile*, 127.  
 Errata, 230.  
*Erythronium americanum*, 128.  
*Euphorbia*, 14, 58; *Cyparissias*, 57,  
     60, in Fruit, 57; *Esula*, 59;  
     *glyptosperma*, 140; *hirsuta*, 140;  
     *maculata*, 140; *serpyllifolia*, 140.  
*Euphrasia*, 105; *americana*, 103, 143;  
     *Randii*, 105, 143; var. *Farlowii*,  
     105, 107, 143.  
 Evans, A. W., Notes in New England  
     Hepaticae,—VIII, 193.  
 Extension of some Ranges in eastern  
     Massachusetts, 38.  
  
*Fagaceae*, 178.  
*Fagus*, 178; *grandifolia*, 178.  
 False Acacia, 181.





- Farlow, W. G., Jane Loring Gray, 41.  
 Fern, Sweet, 178.  
 Fernald, M. L., Flowering Plants and Ferns of Connecticut, 131; A new Variety of *Rhamnus caroliniana*, 79; The North American Variations of *Juncus effusus*, 81; The North American Variations of *Lycopodium clavatum*, 50; Note on *Boehmeria cylindrica*, var. *Drummondiana*, 10; Notes from the phaenogamic Herbarium of the New England Botanical Club, — I, 185; Notes on some northern Species of *Spergularia*, 157; Notes on the Plants of Wine-land the Good, 17; The Representatives of *Erigeron acris* in northeastern America, 225; Some Additions to the Rhode Island Flora, 216; a Summer's Botanizing in eastern Maine and western New Brunswick, 101, 133; Synopsis of the Species of *Arctium* in North America, 43; Two new *Galiums* from northeastern America, 77; The Variations of *Lonicera caerulea* in eastern America, 209.  
 Ferns of Connecticut, Flowering Plants and, 131.  
*Festuca nutans*, 63, 70.  
 Field Meeting of the Vermont Botanical Club, 206.  
 Fir, Balsam, 177.  
 Fletcher, E. F., *Hypericum aureum* a casual Plant in eastern Massachusetts, 55.  
 Flora of Franklin County, Massachusetts, Notes on, 168; of lower Cape Cod; supplementary Note, 8; of the Boston District, Reports on the, — VI, 3, VII, 95; Some Additions to the Rhode Island, 216.  
 Flowering Plants and Ferns of Connecticut, 131.  
 Fly Honeysuckle, American, 184.  
 Flynn, N. F., The sixteenth annual field Meeting of the Vermont Botanical Club, 206; The winter Meeting of the Vermont Botanical Club, 100.  
*Fragaria grandiflora*, 217; *virginiana*, 128.  
 Franklin County, Massachusetts, Notes on the Flora of, 168.  
*Fraxinus*, 184; *americana*, 184; *nigra*, 184; *pennsylvanica*, 108, 110, 141.  
*Frullania*, 193, 202; *cleistostoma*, 203; *eboracensis*, 202; *inflata*, 201–203; Kunzei, 203; *saxicola*, 202, 203; *virginica*, 202.  
 Funariaceae, 146.  
 Gale, Sweet, 178.  
*Galeopsis bifida*, 142; *Tetrahit*, 141, 142, var. *bifida*, 141, 142.  
*Galinsoga caracasana*, 192.  
*Galium*, 116, 229; The Affinities of a certain boreal Variety of, 228; *boreale*, 144; *Brandegei*, 77, 78, *Brandegeei*, 229; *brevipes*, 78, 116; *Claytoni*, 217, 229, 230, var. *subbiflorum*, 229; *labradoricum*, 77, 144; *trifidum*, 77, 78, 228–230, var. *halophilum*, 78, 107, var. *subbiflorum*, 78, 228, 229.  
*Galiums* from northeastern America, Two new, 77.  
*Gaultheria*, 183; *procumbens*, 183.  
*Gaylussacia*, 107, 183; *baccata*, 183; *dumosa*, 106, 156.  
*Geranium maculatum*, 128.  
*Geum urbanum*, 189.  
*Gilia linearis*, 111.  
 Glaucous Willow, 177.  
 Glossy Rose, 180.  
*Glyceria canadensis*, 135; *laxa*, 110, 135.  
 Goldsmith, William Gleason, 227.  
 Gooseberries, 19.  
 Gooseberry, Smooth, 179.  
 Goosefoot, 109.  
 Goose-tongue, 109.  
 Gramineae, 62.  
 Grape, 17–21, 23–25, 35–38; Wild, 17.  
 Grass, Sea, 30; Sword, 132.  
 Grasses, 132; rediscovered, Two Vermont, 40.  
 Graves A. H., Woody Plants of Brooklin, Maine, 173.  
 Graves, C. B. [Notice of Work], 131.  
 Gray, Jane Loring, 41.  
 Gray Birch, 178.  
 Green Alder, Downy, 178.  
*Habenaria* 137; *blephariglottis*, 118; *dilatata*, 114; *fimbriata*, 118, 137; *hyperborea*, 117, 170; *leucophaea*, 118, 119.  
 Hardhack, 179.  
 Harger, E. B. [Notice of Work], 131.  
 Harpidium, 154.  
 Harrison, A. K., Reports on the Flora of the Boston District,—VI, 3, VII, 95.

- Hauerbesien, 23.  
 Havgraes, 27.  
 Hawkweed, Orange, 104.  
 Hawthorn, 180.  
 Heart-leaved Willow, 177.  
 Hedysarum boreale, 113.  
 Helianthus Maximilliani, 192.  
 Hemicarpha micrantha, 39.  
 Hemlock, 177.  
 Hepatica triloba, 128.  
 Hepaticae, Notes on New England,  
     — VIII, 193.  
 Heteranthera, 7; dubia, 7.  
 Heydelbéeren, 23.  
 Hieracium, 146; aurantiacum, 104;  
     floribundum, 103, 146.  
 High Blueberry, 183.  
 Hill, E. J., The Pasture-thistles, East  
     and West, 211.  
 Hindberries, 19.  
 Hitchcock, A. S. [Notice of Work],  
     218.  
 Hoary Alder, 178.  
 Hobble, Witch, 184.  
 Hobble-bush, 184.  
 Holderness, New Hampshire, Po-  
     gonia trianthophora in, 206.  
 Holly, Mountain, 182.  
 Honeysuckle, American Fly, 184;  
     Bush, 184; Trumpet, 184.  
 Hordeum jubatum, 26.  
 Horse Chestnut, 32.  
 Houstonia caerulea, 129.  
 Howe, R. H., Jr., Ramalina Montag-  
     naei De Not. on Long Island, 7.  
 Huckleberry, Black, 183; Squaw,  
     168.  
 Hundahveiti, 27.  
 Hunde Hvede, 27.  
 Hvede, 27; Hunde, 27; Vild, 27, 28.  
 Hvedegraes, 27.  
 Hveiti, 25, 26, 30, 37, 38.  
 Hveti, 32.  
 Hydrocharitaceae, 4.  
 Hyoscyamus, 191; niger, 191, 215,  
     Note on Desmodium canescens  
     and, 214.  
 Hypericum aureum, 55, a casual  
     Plant in eastern Massachusetts, 55.  
 Hypnum, 136; aduncum, 154; Kneif-  
     fi, 154; Sendtneri, 154; uncina-  
     tum, 154.  
 Hypochaeris radicata, 217.  
 Ilex, 181; verticillata, 181, var.  
     tenuifolia, 181.  
 Indian Corn, 17, 25, 26, 37, 38.  
 Iris Hookeri, 105; setosa, var. cana-  
     densis, 105.  
 Iva xanthiifolia, 117, 144.  
 Ivy, Poison, 181.  
 Jepson, W. L. [Notice of Work], 56.  
 Johannisbeeren, 22.  
 Josselyn Botanical Society of Maine,  
     Annual Meeting, 99.  
 Juncaceae, 95.  
 Juncus, 81, 95; acuminatus, 95;  
     aemulans, 89; alpinus, 111, 112;  
     articulatus, 95, 98, var. obtusatus,  
     95; **articulatus** × **brevicaudatus**,  
     137; balticus, var. littoralis, 95,  
     113; brachycarpus, 96, 112; brevi-  
     caudatus, 96; bufonius, 96, var.  
     congestus, 96, var. halophilus, 96,  
     107; canadensis, 96; communis,  
     var. effusus, 84; conglomeratus,  
     84, 86; dichotomus, var. platy-  
     phyllus, 96, 108, 137, 216; effusus,  
     81-85, North American Varia-  
     tions of, 81, var. aemulans, 89,  
     var. atratus, 82, var. brunneus,  
     84-86, 88-90, var. compactus,  
     82-86, 89, 92, 96, var. conglomera-  
     tus, 83-86, var. decipiens, 82, 83,  
     85, 87, 93, 96, var. **exiguus**, 83,  
     87, 90, var. fistulosus, 82, var.  
     gracilis, 84, 85, 88, 89, var. hes-  
     perius, 88, var. **pacificus**, 84, 89,  
     var. **Pylaei**, 84-87, 92, 96, var.  
     **solutus**, 82, 84, 85, 87, 90, 92, 93,  
     97; filiformis, 97; Gerardi, 97;  
     Greenei, 97; Leersii, 86; margi-  
     natus, 97; militaris, 97; nodosus,  
     98; pelocarpus, 98; Pylaei, 92;  
     secundus, 98; stygius, var. ameri-  
     canus, 116, 177; tenuis, 82, 98,  
     var. anthelatus, 98, var. Williamsii,  
     98; Vaseyi, 108, 137.  
 Jungermannia acuta, 197; badensis,  
     197; interrupta, 200; Kaurini, 198,  
     laxa, 199; marchica, 199; Milde-  
     ana, 199; Novae-Caesareae, 199.  
 Juniper, Low, 177.  
 Juniperis, 177; communis, var. de-  
     pressa, 177, var. montana, 177;  
     horizontalis, 105, 177, 218, and J.  
     virginiana, Note on, 218; virgini-  
     ana, 9, 218.  
 Kalmia, 183; angustifolia, 183; lati-  
     folia, 1, forma **alba**, 2, var. **alba**,  
     2, forma **fuscata**, 2, var. **fus-**  
     **cata**, 2, forma **minor**, 2, forma  
     **myrtifolia**, 2, var. **myrtifolia**, 2,  
     var. **monstruosa**, 1, var. **nana**, 2,  
     Note on the Forms of, 1, forma  
     **obtusata**, 2, var. **obtusata**, 3, var.



- Pavartii, 2, forma **polypetala**, 1, var. **polypetala**, 1, forma **rubra**, 2, var. **rubra**, 2; **myrtifolia**, 2.
- Kern, F. D., Two new Species of *Uromyces* on *Carex*, 124.
- King Devil Weeds, 103.
- Kirk, G. L., Two Vermont Grasses rediscovered, 40.
- Kjarrhveiti, 27.
- Knowlton, C. H., Note on *Scheuchzeria palustris*, 156; *Pinus resinosa* in Norwood, Massachusetts, 27; Reports on the Flora of the Boston District,—VI, 3, VII, 95.
- Kobresia elachycarpa, 112.
- Labrador Tea, 182.
- Lactuca, 145; *canadensis*, 145; *hirsuta*, 145; *integrata*, 15.
- Lambkill, 183.
- Lappa intermedia, 45; major, 44, subvar. *purpurascens*, 45; minor, 47; *officinalis*, 44; *tomentosa*, 45.
- Lapsana communis, 145.
- Larch, American, 177.
- Larches, 117.
- Large Cranberry, 183, toothed Aspen, 178.
- Larix, 177; *laricina*, 103, 177.
- Laurel, Sheep, 183.
- Leather Leaf, 183.
- Lechea intermedia, 108.
- Ledum, 182; *groenlandicum*, 118, 182.
- Leguminosae, 181.
- Lemna, 5; minor, 5; *trisculca*, 5; *Valdiviana*, 5.
- Lemnaceae, 5.
- Lepigonum leiospermum, 158, 163; *marinum*, 161; *salinum*, 159, 162.
- Leptoscyphus, 201.
- Leskea, 153.
- Lettuce, Prickly, 15.
- Liatris, 14.
- Lilac, Common, 184.
- Lilium canadense, 111.
- Limosella, 143; *aquatica*, var. *tenuifolia*, 120, 143.
- Linaria minor, 142.
- Ling-berry, 23.
- Lingon, 23.
- Linum floridum, 190.
- Liparis liliifolia, 168.
- Lithospermum officinale, 170.
- Lobelia Kalmii, 112, 114, 117.
- Locust, Clammy, 181; Common, 181.
- Loiseleuria procumbens, 107.
- Lolium temulentum, 185, var. *leptochaeton*, 185.
- Long, B., Range Extension of *Scirpus Smithii*, var. *setosus*, 155.
- Long Island, Ramalina Montagnaei DeNot. on, 7.
- Lonicera, 166, 167, 184; *caerulea*, 209, in eastern America, The Variations of, 209, var. **calvescens** 210, 211, var. *canadensis*, 210, var. *villosa*, 109, 117, 129, 209–211; *canadensis*, 129, 184; *flava*, 167; *flavescens*, 167; **flavida**, 167; *oblongifolia*, 117–119; *parviflora*, var. *Sullivantii*, 167; **prolifera**, 166, 167, and *L. flavida*, 166; *reticulata*, 166; *rupestris*, 166; *sempervirens*, 176, 184, var. *Sullivantii*, 167; *Sullivantii*, 166, 167.
- Lophotocarpus, 3; *spongiosus*, 3, 120, 143.
- Lophozia, 193; *alpestris*, 204; *badenensis*, 197, 198; *Kaurini*, 193, 198, 199; *marhica*, 199, 200; *Mildeana*, 199, 200; *Muelleri*, 197, 198; *Novae-Caesariae*, 199; *Rutheana*, 198, 199.
- Low Black Blueberry, 183; Juniper, 177; Rose, 180; Sweet Blueberry, 183.
- Luzula, 14, 98; *campestris*, var. *multiflora*, 98, 128; *saltuensis*, 99, 128, 170.
- Lycopodium annotinum, var. *pungens*, 107, 133; *clavatum*, 50–54, The North American Variations of, 50; var. *brevispicatum*, 54, 55; var. *integerrimum*, 54, 55; var. **megastachyon**, 53, 55; *monostachyon*, 50–53, 55; *sabinaefolium*, 110, 133, 207; *Selago*, var. *appressum*, 54; *tristachyum*, 207.
- Lycopus, *europaeus*, 191.
- Lyme-grass, Sea, 27.
- Lyngbya aestuarii, 9.
- Lysimachia, 141; *producta*, 217; *terrestris*, 141; **terrestris** × **thyrsiflora**, 141; *thyrsiflora*, 141.
- Maine and western New Brunswick, A Summer's Botanizing in eastern, 101, 133; Annual Meeting, The Josselyn Botanical Society of, 99; Woody Plants of Brooklin, 173.
- Malva sylvestris, 140, 141; var. *mauretiana*, 140.
- Mamillaria, 14.
- Maple, 30, 32, 37, 38; Mountain, 37, 182; Red, 182; Rock, 182; Striped, 182; Sugar, 182; Swamp, 182.

- Margräs, 30.  
 Masbjörk, 30.  
 Maser-birke, 30.  
 Massachusetts, *Botrychium obliquum*, var. *oneidense* in eastern, 80; The Extension of some Ranges in eastern, 38; flowering in April, Plants of eastern, 127; *Hypericum aureum* a casual Plant in eastern, 55; Notes on the Flora of Franklin County, 168; *Pinus resinosa* in Norwood, 217; *Tetraplodon australis* in, 156; Two Plants new to, 204.  
 Masur, 31, 32.  
 Masurbjörk, 31.  
 Matricaria *Chamomilla*, var. *coronata*, 104, 144; *inodora*, 104; *suaevolens*, 144.  
 Mausurr, 30.  
 Mazer, 30.  
 Meadow-sweet, 179.  
 Meal-grass, 27, 29, Sand, 27.  
 Melgras, 27.  
 Melilotus alba, 16; indica, 190.  
 Melr, 27-30.  
 Melur, 27.  
 Menyanthes trifoliata, 11, in West Virginia, 11.  
 Metzgeria *crassipilis*, 204; *furcata*, 204.  
 Micromitrium, 146.  
 Microspora, 9.  
 Mimoseae, 16.  
 Mitella *diphylla*, 170.  
 Montia *fontana*, 138, 146, var. **tenerrima**, 138; Hallii, 138; *lamprosperma*, 106, 138, 146; minor, 138; *rivularis*, 138, 146.  
 Moore, A. H., *Agropyron capinum* and its North American Allies, 61; Notes on *Agropyron*, 205; William Gleason Goldsmith, 227.  
 Moosewood, 182, 184.  
 Mosses, Notes on Connecticut, 146.  
 Mösurr, 31, 32.  
 Mqsurr, 30, 37, 38; Wood, 18, 25, 30, 32.  
 Mountain Ash, American, 179; Ash, *Spiraea*, 179; Blackberry, 180; Cranberry, 23, 25, 34, 35, 37, 183; Holly, 182; Maple, 37, 182.  
 Moxie Plum, 183.  
 Muhlenbergia, 40; *racemosa*, 40; *sobolifera*, 40.  
 Mylia, 201.  
 Myosotis *virginica*, 129.  
 Myrica, 178; *asplenifolia*, 128, 178; *carolinensis*, 119, 178; Gale, 117, 128, 178.  
 Myricaceae, 178.  
 Myriophyllum *alterniflorum*, 190, 191; *ambiguum*, forma *capillaceum*, 190.  
 Myrtillum, 23.  
 Myrtle-tree, 23.  
 Nabalus *Boottii*, 6.  
 Najadaceae, 12.  
 Nanomitrium, 146-148, 150; Austini, 147, 148; *synoicum*, 148.  
 Nelson, A. [Notice of Work], 13.  
 Nemopanthus, 182; *mucronata*, 182.  
 New Brunswick, A Summer's Botanizing in eastern Maine and western, 101, 133.  
 New England Botanical Club, Notes from the phaenogamic Herbarium of the,— I, 185; Hepaticae, Notes on,— VIII, 193.  
 New Hampshire, A fourth *Pinus rigida* for Coos County, 99; *Pogonia trianthophora* in Holderness, 206.  
 New hybrid *Cornus* (*Cornus rugosa* × *stolonifera*), 121; Variety of *Rhamnus caroliniana*, 79.  
 Nichols, G. E., Notes on Connecticut Mosses, 146.  
 Niggerheads, 132.  
 North America, Synopsis of the Species of Arctium in, 43.  
 North American Allies, *Agropyron caninum* and its, 61; Species of *Panicum*, 218; Variations of *Juncus effusus*, 81; Variations of *Lycopodium clavatum*, 50.  
 Norwood, Massachusetts, *Pinus resinosa* in, 217.  
 Note on *Boehmeria cylindrica*, var. *Drummondiana*, 10; on *Desmodium canescens* and *Hyoscyamus niger*, 214; on *Juniperus horizontalis* and *J. virginiana*, 218; on *Scheuchzeria palustris* L., 156; on the Forms of *Kalmia latifolia*, 1.  
 Notes from the phaenogamic Herbarium of the New England Botanical Club,— I, 185; on *Agropyron*, 205; on Connecticut Mosses, 146; on New England Hepaticae,— VIII, 193; on *Peltandra*, Rafinesque, 47; on recent Publications, 56; on some northeastern Species of *Spergularia*, 157; on the Flora of Franklin County, Massachusetts, 168; on the Plants of Wine-land the Good, 17.  
 Oak, Poison, 181; Red, 179; Scrub, 8.

- Oakesia sessilifolia*, 128.  
 Oat, Sand, 27, 29; Strand, 28.  
 Oat-grass, 27.  
*Oenothera*, 14; *cruciata*, 108, 109, 141; *fruticosa*, 108, var. *hirsuta*, 108, 109, 141; *pratensis*, 109; *pumila*, 108.  
*Oleaceae*, 184.  
*Onoclea Struthiopteris*, 111, 170.  
 Orange Hawkweed, 104.  
 Ornamental Shrubs of the United States, 207.  
*Osmorhiza longistylis*, 113.  
*Ostrya virginiana*, 128.  
*Oxalis*, 14.  
  
 Painted Trillium, 163.  
*Panax trifolia*, 129.  
*Panicum*, 108, 218-220; *dichotomiflorum*, 220; *dichotomum*, 216; *implicatum*, 110; *Lindheimeri*, 216; *multiflorum*, 220; The North American Species of, 218; *polyanthes*, 220; *tennesseense*, 110, 133; *viride*, var. *brevisetum*, 134.  
 Paper Birch, 178.  
*Parnassia caroliniana*, 112, 114, 117, 118, 187; *parviflora*, 117.  
*Parosela*, 14.  
*Parthenocissus*, 14.  
 Pasture Rose, 180; Thistles, east and west, 211.  
 Pear, Sugar, 109.  
 Pease, A. S., *Agropyron caninum* and its North American Allies, 61.  
*Pedicularis canadensis*, 108; *lan-ceolata*, 186, 192.  
*Pedinophyllum*, 200, 201; *interruptum*, 193, 200, 201; *pyrenaicum*, var. *interrupta*, 200.  
 • *Pellia Fabroniana*, 204; *Neesiana*, 203.  
*Peltandra*, 5; *angustifolia*, 50; *heterophylla*, 49; *Rafinesque*, Notes on, 47; *sagittifolia*, 47; *undulata*, 48; *virginica*, 5, 48, 50, var. ***angustifolia***, 50, ***heterophylla***, 49, 50.  
*Peltandrae*, 47.   
*Petasites vulgaris*, 129.   
*Philonotis*, 152, 154; *caespitosa*, 152, 153; *fontana*, 152, 153; *marchica*, 152; *Muhlenbergii*, 152.  
*Phlox subulata*, 129.   
*Phragmites communis*, 117-119.  
*Physcomitrium immersum*, 151.  
*Picea*, 177; *canadensis*, 103, 177; *mariana*, 177; *nigra*, 175, *rubra*, 175, 177.  
  
*Pinaceae*, 103, 176.  
 Pine, Pitch, 99, 176; Red, 176; White, 176.  
*Pinguicula vulgaris*, 117.  
*Pinus*, 176; *resinosa*, 103, 176, 217, in Norwood, Massachusetts, 217; *rigida*, 99, 176, for Coos County, New Hampshire, A fourth, 99; *Strobus*, 176.  
 Pitch Pine, 99, 176.  
*Plagiochila*, 200, 201; *interrupta*, 200; *lobata*, 200; *macrostoma*, 200; *pyrenaica*, 200, var. *interrupta*, 200.  
*Plantago*, 109; *decipiens*, 109.  
 Plants and Ferns of Connecticut, Flowering, 131; new to Massachusetts, Two, 204; of Brooklin, Maine, Woody, 173; of eastern Massachusetts flowering in April, 1910, 127; of Wineland the Good, Notes on the, 17; Use of corrugated paper Boards in drying, 221.  
 Plum, Moxie, 183.  
*Poa annua*, 127; *compressa*, 214; *pratensis*, 214.  
*Pogonatum brachyphyllum*, 153; *tenue*, 153.  
*Pogonia pendula* 206; *trianthophora*, 206, in Holderness, New Hampshire, 206.  
 Poison Ivy, 181; Oak, 181.  
*Polygala Senega*, 113.  
*Polygonatum biflorum*, 128; *giganteum*, 189; *latifolium*, 189.  
*Polygonum*, 14; *calophylla*, 15; *dumetorum*, 189; *Fowleri*, 107; *lilacina*, 15.  
*Pomme de terre*, 34, 35.  
*Pontederia*, 7; *cordata*, 7.  
*Pontederiaceae*, 7.  
 Poplar, Balsam, 178; Silver-leaved, 178; White, 178.  
*Populus*, 178; *alba*, 9, 175, 178; *balsamifera*, 178; *candicans*, 175, 178; *grandidentata*, 128, 178; *tremula*, 32; *tremuloides*, 128, 178.  
*Porella pinnata*, 204.  
*Potamogeton*, 204; *hybridus*, 204, var. *multi-denticulatus*, 204; *Vas-eyi*, 133; *zosterifolius*, 116.   
*Potentilla*, 180; *Anserina*, 112; *arguta*, 113; *canadensis*, var. *simplex*, 128; *fruticosa*, 112, 187; *palustris*, var. *subsericea*, 111, 140, var. *villosa*, 39, 111, 140; *pumila*, 128; *reptans*, 189; *tridentata*, 180.  
 Prairie Willow, 178.



- Preisselbeere, 23.  
 Preissia quadrata, 204.  
 Prenanthes, 6; Boottii, 6; racemosa, 112.  
 Prickly Lettuce, 15.  
 Primula mistassinica, 112-115.  
 Prunus, 180; avium, 128, 176, 181; Cerasus, 32; cuneata, 128; nigra, 128; pennsylvanica, 128, 181; pumila, 113; serotina, 180; spinosa, 128; virginiana, 181.  
 Psedera, 182; quinquefolia, 182.  
 Pterigynandrum filiforme, 153.  
 Puccinia, 124, 125.  
 Pulsatilla hirsutissima, 16.  
 Pyrola asarifolia, 113, var. incarnata, 117.  
 Pyrus, 179; americana, 179; arbutifolia, 179; Malus, 179; melanocarpa, 117, 179.  
  
 Quercus, 179; alba, 8; ilicifolia, 8; prinoides, 8, var. rufescens, 8; rubra, 179; Sadleriana, 56; stellata, 8; velutina, 8.  
 Quick-grass, 27.  
  
 Raeda Winbaer, 21.  
 Raisin de mare, 21.  
 Raisin, Wild, 184.  
 Ramalina Montagnaei De Not. on Long Island, 7.  
 Range extension of Scirpus Smithii, var. setosus, 155.  
 Ranunculus, 94; abortivus, 128; allegheniensis, 128; bulbosus, 104, 128; delphinifolius, 108, 109, 139; fascicularis, 128; Purshii, 116, 139.  
 Raspberries, 119.  
 Raspberry, Wild Red, 180.  
 Ratibida, 14.  
 Red Cherry, Wild, 181; Chokeberry, 179; Currant, 21, 22, 25, 32, 33; Maple, 182; Oak, 179; Pine, 176; Raspberry, Wild, 180; Spruce, 177; Whortleberry, 23, 34, 35.  
 Red-berried Elder, 184.  
 Reed, Sand, 28, 30, 36.  
 Rehder, A., Lonicera prolifera and L. flavida, 166; A new hybrid Cornus (Cornus rugosa  $\times$  stolonifera), 121; Note on the forms of Kalmia latifolia, 1.  
 Reports on the Flora of the Boston District,—VI, 3, VII, 95.  
 Representatives of Erigeron acris in northeastern America, 225.  
 Rhamnus alnifolia, 103, 117, 140; caroliniana, 79, A new Variety of, 79, var. mollis, 79; Frangula, 79. Rhinanthus Crista-Galli, 143, 144, var. fallax, 143; oblongifolius, 144.  
 Rhode Island Flora, Some Additions to the, 216; Sclerolepis uniflora in, 13.  
 Rhododendron, 182; canadense, 129, 182; catawbiense, 3.  
 Rhodora, 182.  
 Rhus, 181; copallina, 120; Toxicodendron, 181; typhina, 181.  
 Ribes, 20, 21, 179; alpinum, 21, americanum, 34; floridum, 34; lacustre, 33, 38; nigrum, 22, 32, 176, 179; oxyacanthoides, 128, 179; prostratum, 33, 38, 128, 179; rubrum, 21-33; triste, 33, 38; vulgare, 21, 32, 33.  
 Ribs, 21.  
 Riccia epicarpa, 193; lanigera, 196; Lindenberghiana, 193; membranacea, 196, 197; minima, 193, 195, 196; nigrella, 195, 196; Raddiana, 193; sorocarpa, 193-196; tenuis, 196.  
 Ricciaceae, 193.  
 Ricciella, 197; cristallina, 197; fluidans, 204; membranacea, 196.  
 Rice, American Wild, 25; Wild, 17, 26, 37, 38.  
 Robinia, 181; Pseudo-Acacia, 181; viscosa, 181.  
 Robinson, B. L. Coulter & Nelson's Botany of the central Rocky Mountains, 13; Notes on recent Publications, 56; Ornamental Shrubs of the United States, 207.  
 Rock Cranberry, 23, 25, 34, 35, 183; Maple, 182.  
 Röda Vínbär, 21, 32.  
 Roripa, 14.  
 Rosa, 180; acicularis, var. Bourgeauiana, 120; cinnamomea, 180; humilis, 180; rubiginosa, 180; spinosissima, 176, 180; virginiana, 180.  
 Rosaceae, 179.  
 Rose, Cinnamon, 180; Glossy, 180; Low, 180; Pasture, 180; Scotch, 180.  
 Rubus, 110, 180; allegheniensis, 180; canadensis, 103, 180; Chamaemorus, 106, 109; hispidus, 180; idaeus, var. aculeatissimus, 180; triflorus, 128; villosus, 120.  
 Rumex, 138; Brittanica, 104, 138; occidentalis, 107; Patientia, 104, 138.  
 Running Swamp Blackberry, 180.

- Ruppia*, 12.  
 Russian Thistle, 15.  
*Rynchospora alba*, var. *macra*, 186;  
     *capillacea*, 114.  
*Sagina nodosa*, 106, 107.  
*Sagittaria*, 4, 116; *arifolia*, 116;  
     *cuneata*, 116; *Engelmanniana*, 4;  
     *graminea*, 4; *heterophylla*, 4, var.  
     *rigida*, 4; *latifolia*, 4; *subulata*,  
     var. *gracillima*, 4; *teres*, 4.  
*Salicaceae*, 177.  
*Salix*, 177; *alba*, 104, var. *vitellina*,  
     128, 175, 177; *balsamifera*, 103;  
     *candida*, 117, 187; *coactilis*, 110;  
     *cordata*, 177; *discolor*, 128, 177;  
     *fragilis*, 104, 128; *glaucophylla*,  
     111; *humilis*, 128, 178; *lucida*,  
     177, var. *intonsa*, 110; *nigra*, 110,  
     175, 177; *pellita*, 110, 111; *petio-*  
     *laris*, var. *angustifolia*, 137; *pseu-*  
     *domyrsinites*, 117; *rostrata*, 128,  
     178; *Smithiana*, 104, 137; *vimina-*  
     *lis*, 104.  
*Salsola pestifer*, 15.  
*Sambucus*, 184; *canadensis*, 184;  
     *racemosa*, 184.  
*Samolus floribundus*, 120, 143.  
 Sand Meal-grass, 27; Oat, 27, 29;  
     Reed, 28, 30, 36; Roir, 30; Wheat,  
     36.  
 Sandhavre, 27, 28.  
 Sandmelgras, 27.  
 Sandweizen, 36.  
*Sanguinaria canadensis*, 128.  
*Sanícula gregaria*, 192.  
*Sassafras*, 165; *variifolium*, 165.  
*Saxifraga aizoon*, 111; *virginiensis*,  
     128.  
*Saxifragaceae*, 179.  
*Scapania dentata*, 204.  
*Scheuchzeria*, 156; *palustris* L.,  
     Note on, 156.  
*Scirpus caespitosus*, 106, 118, 119;  
     *Clintonii*, 112; *cyperinus*, var.  
     *pellus*, 110; *debilis*, 155; *fluvia-*  
     *tilis*, 111, 120, 135, 186; *hetero-*  
     *chaetus*, 186; *hudsonianus*, 118;  
     *pauciflorus*, 114; *pedicellaris*, 110;  
     *planifolius*, 112; *Smithii*, 155, 156,  
     var. *setosus*, 155, Range Extension  
     of, 155.  
*Sclerolepis uniflora*, 13, in Rhode  
     Island, 13.  
*Scelopendrium vulgare*, 115.  
 Scotch, Rose, 180.  
*Serophularia leporella*, 113, 217;  
     *marilandica*, 192.  
 Scrub Oaks, 8.  
*Scutellaria Churchilliana*, 113.  
 Sea Grass, 30; Lyme-grass, 27.  
 Sedges, 132.  
*Sedum roseum*, 106.  
 Seigle de Mer, 36.  
*Selaginella selaginoides*, 116.  
*Senecio Balsamitae*, 112; *obovatus*,  
     187; *Robbinsii*, 103; *sylvaticus*,  
     106; *vulgaris*, 106.  
 Service Berry, 180.  
*Setaria glauca*, 134; *viridis*, 133, 134,  
     var. *brevisetia*, 134, var. *Wein-*  
     *manni*, 133, 134; *Weinmanni*,  
     134.  
 Shad Bush, 180.  
 Sheep Laurel, 183.  
 Sheldon, J. L., *Menyanthes trifoli-*  
     *ata* in West Virginia, 11.  
 Shining Willow, 177.  
 Shrubs of the United States, Orna-  
     mental, 207.  
*Silene antirrhina*, 129, 130, Some  
     Facts relating to, 129, var. *laevi-*  
     *gata*, 130.  
 Silver-leaved Poplar, 178.  
*Sisymbrium officinale*, 189.  
*Sisyrinchium atlanticum*, 216; *gram-*  
     *ineum*, 216.  
 Skunk Currant, 33, 179.  
 Sleepy Catchfly, 129.  
 Small Cranberry, 183.  
 Smilacina, 14.  
 Smooth Gooseberry, 179.  
 Snowberry, Creeping, 183.  
 Society of Maine, Annual Meeting,  
     The Josselyn Botanical, 99.  
*Solanum*, 40; *Dulcamara*, var. *vil-*  
     *losissimum*, 40; new to America,  
     A Variety of, 40.  
*Solidago*, 126; *altissima*, 114; *cana-*  
     *densis*, 144; *hispida*, 114; *macro-*  
     *phylla*, 105, 107; *neglecta*, 9;  
     *puberula*, 9; *racemosa*, 114; *ru-*  
     *gosa*, 126.  
 Some Facts relating to *Silene antir-*  
     *rhina*, 129.  
*Sonchus arvensis*, var. *glabrescens*,  
     145.  
*Sorbaria*, 179; *sorbifolia*, 176, 179.  
 Sour-top Blueberry, 183.  
*Sparganium eurycarpum*, 108, 110.  
 Species of *Spergularia*, Notes on  
     some northern, 157; related to  
     *V. oligophylla*, *Vernonia georgi-*  
     *ana*, a new, 171.  
 Speckled Alder, 178.  
*Spergula*, 159, 160; *leiosperma*, 162.  
*Spergularia* 14, 157-160, 162; *borea-*  
     *lis*, 161; *canadensis*, 157, 160, 161;

- leiosperma, 160-163; marginata, 160, 161; marina, 157, 159, 162; media, 158-161; Notes on some northern Species of, 157; rubra, 157; salina, 159-163, var. leiosperma, 163, var. minor, 163.
- Sphagnum, 106, 136.
- Spiraea, 179; latifolia, 179; Mountain Ash, 179; tomentosa, 179.
- Spiranthes, 14; lucida, 170, 187; Romanzoffiana, 117.
- Spirodela, 5; polyrhiza, 5.
- Spirogyra, 9.
- Sporobolus Richardsonis, 112.
- Spruce, 117; Black, 177; Cat, 177; Red, 177; White, 177.
- Spurge, Cypress, 58.
- Squaw Huckleberry, 168.
- Stachys ambigua, 191; palustris, 110; tenuifolia, var. aspera, 142.
- Staghorn Sumach, 181.
- Steinbeere, 23.
- Stellaria, 14; humifusa, 107; media, 128; uliginosa, 128.
- Strand Oat, 27; Wheat, 27, 29, 36, 37.
- Strandhvede, 28, 28.
- Strawberries, 19.
- Striped Maple, 182.
- Suaeda, 14; Moquinii, 16.
- Sugar Maple, 182; Pear, 109.
- Sumach, Staghorn, 181.
- Summer's Botanizing in eastern Maine and western New Brunswick, 101, 133.
- Svarte Vinbaer, 21, 22; Vinbär, 32; Wünbaer, 21.
- Swamp Blackberry, Running, 180; Blueberry, 183; Maple, 182.
- Sweet Blueberry, Early, 183; Blueberry, Low, 183; Cherry, 181; Fern, 178; Gale, 178.
- Sweetbrier, 180.
- Sword Grass, 132.
- Symplocarpus, 5; foetidus, 5, 128.
- Synopsis of the Species of Arctium in North America, 43.
- Syringa, 184; vulgaris, 184.
- Tamarack, 177.
- Tanacetum huronense, 110, 113.
- Taraxacum erythrospermum, 129; officinale, 129, var. palustre, 129.
- Taxaceae, 176.
- Taxus, 176; canadensis, 176.
- Tea, Labrador, 182.
- Teaberry, 183.
- Teratology in Trillium, 163.
- Tetraplodon australis, 156, in Massachusetts, 156.
- Thalictrum confine, 110, 113; dioicum, 128; occidentale, 113; polygamum, 55.
- Thistle, Russian, 15.
- Thistles, east and west, The pasture, 211.
- Thorns, 119.
- Three-toothed Cinquefoil, 180.
- Thuja, 177; occidentalis, 177.
- Tiarella cordifolia, 170.
- Tidestrom, I., Notes, on Peltandra, Rafinesque, 47.
- Tissa canadensis, 161; marina, 157, 162; salina, 161.
- Tofieldia glutinosa, 112, 115, 117-119, 206.
- Trachyclea, 202.
- Tradescantia, 7; virginiana, 7.
- Tridens flavus, 205.
- Trientalis americana, 129.
- Trifolium agrarium, 104; medium, 189; præumbens, 104.
- Triglochin maritima, 113, 117-119, palustris, 107, 112.
- Trillium, 165; cernuum, 128; erectum, 128, 165; Painted, 163; Teratology in, 163; undulatum, 163.
- Triosteum aurantiacum, 113.
- Trisetum melicoides, 113.
- Triticum, 26, 27, 61, 66; biflorum, 62, 65, 66, 74, var. Hornemanni, 64, 66, 74; caninum, 26, 27, 62, 63, 70, 205, var. Gmelini, 61, 66, 75, var. typicum, 70; pungens, 26; repens, 62, 74; repens, A. virescens, 65; repens, B. Hornemanni, 65; Richardsoni, 67, 76; sepium, 63, 70; tenerum, 26; violaceum, 26, 27, 64, 67, 74; vulgare, 26, 27.
- Trumpet Honeysuckle, 184.
- Tsuga, 177; canadensis, 177.
- Tussilago Farfara, 129.
- Two new Galiums from northeastern America, 77; new Species of Uromyces on Carex, 124; Plants new to Massachusetts, 204; Vermont Grasses rediscovered, 40.
- Typha angustifolia, 120.
- Tytebaer, 23.
- Tyteling, 23.
- Ulmus, 179; americana, 128, 179; campestris, 128.
- Uredinales, 125.
- Uromyces, 124-126; caricina, 126; minutus, 126; on Carex, Two new Species of, 124; perigynius, 126; solidaginis-caricis, 126, 127; uni-



- porulus**, 125, 126; **valens**, 125, 126.
- Urticaceae, 179.
- Use of corrugated paper Boards in drying Plants, 221.
- Utricularia cornuta, 117.
- Uvularia, 127; perfoliata, 128.
- Vaccinia, 24.
- Vaccinium, 168, 183; atrococcum, 129; canadense, 183; corymbosum, 129, 183; macrocarpon, 183; Oxycoccus, 35, 183; pennsylvanicum, 129, 176, 183, var. angustifolium, 106, 141, var. nigrum, 176, 183; stamineum, 168, 169; Vitis-Idaea, 23-25, 34-36, 38, var. minus, 34, 183, var. pumilum, 34.
- Valeriana uliginosa, 116-118.
- Vallisneria, 4; spiralis, 4.
- Variations of Juncus effusus, North American, 81; of Lonicera caerulea in eastern America, 209.
- Variety of Galium, The Affinities of a certain boreal, 228; of Rhamnus caroliniana, A new, 79; of Solanum new to America, 40.
- Veined-birch, 30.
- Velvet-leaf Blueberry, 183.
- Vermont Botanical Club, The sixteenth annual field Meeting of the, 206; Botanical Club, The winter Meeting of the, 100; Grasses rediscovered, Two, 40.
- Vernonia, 171; angustifolia, 171; **georgiana**, 171, 172, a new Species related to V. oligophylla, 171; noveboracensis, 171; oligophylla, 171, 172.
- Vernoniae, 171.
- Veronica Anagallis-aquatica, 187; arvensis, 129; serpyllifolia, 129.
- Viburnum, 184; alnifolium, 129, 184; cassinoides, 184; dentatum, 108.
- Vicia angustifolia, var. uncinata, 140.
- Vild Hvede, 27, 28.
- Viinbaer, 21.
- Vinbaer, 21, 24, 32, 36; Svarte, 21, 22.
- Vinbar, 32; Røda, 21, 32; Svarte, 32.
- Vinber, 18, 20, 25, 32, 34-38.
- Vindrufva, 20.
- Viola affinis, 39; conspersa, 129; cucullata, 128; fimbriatula, 129; labradorica, 114; lanceolata, 129; nephrophylla, 112, 115; pallens, 129; papilionacea, 128; pedata, var. lineariloba, 128; rotundifolia, 129; sagittata, 129; scaberruscula, 129; Selkirkii, 113; septentrionalis, 129; sororia, 129.
- Virginia, Crataegus viridis L., in, 93; Creeper, 182.
- Vitaceae, 182.
- Vitis, 19-21, 23, 25; aestivalis, 19; bicolor, 19; Idaea, 23; Labrusca, 17, 19, 120; vulpina, 19, 114.
- Waldsteinia, 170; fragarioides, 170.
- Washingtonia, 14.
- Water Crowfoot, 108.
- Waterberry, 109.
- Weatherby, C. A. [Notice of Work], 131.
- West Virginia, Menyanthes trifoliata in, 11.
- Wheat, 18, 25-28, 36; Blue, 27; Cur, 27; Dog, 27; Grass, 27, 29; Strand, 27, 29, 36, 37; Wild, 27, 29.
- White Ash, 184; Birch, 37, 178; Pine, 176; Poplar, 178; Spruce, 177; Weed, American, 15; Willow, 177.
- Whortes, 23.
- Whortle Berries, 23.
- Whortle-berry, Red, 23, 34, 35.
- Wiegand, K. M., The Affinities of a certain boreal Variety of Galium, 228; The Extension of some Ranges in eastern Massachusetts, 38; The North American Variations of Juncus effusus, 81; Notes on some northern Species of Spargularia, 157; The Representatives of Erigeron acris in northeastern America, 225; A summer's Botanizing in eastern Maine and western New Brunswick, 101, 133; Synopsis of the Species of Arctium in North America, 43; Two new Galiums from northeastern America, 77; The Variations of Lonicera caerulea in eastern America, 209.
- Wild Black Cherry, 180; Grape, 17; Raisin, 184; Red Cherry, 181; Red Raspberry, 180; Rice, 17, 26, 37, 38; Rice, American, 25; Wheat, 27, 29.
- Williams, E. F., Notes on the Flora of Franklin County, Massachusetts, 168.
- Willow, Black, 177; Glaucous, 177; Heart-leaved, 177; Prairie, 178; Shining, 177; White, 177.
- Wiinbaer, Svarte, 21.
- Wina-maria, 21.

- Winbaer, Raeda, 21.  
Wineberries, 19, 23.  
Wine-berry, 18, 20-25, 32, 34-36.  
Wineland the Good, Notes on the  
Plants of, 17.  
Winter Meeting of the Vermont  
Botanical Club, 100.  
Winterberry, 181.  
Wintergreen, Creeping, 183.  
Witch-grass, 27; Hobble, 184.  
Withe-rod, 184.  
Wood, Mosurr, 18, 25, 30, 32.  
Woodbine, 182.  
Woodsia alpina, 114, 206; glabella,  
206; ilvensis, 168.  
Woody Plants of Brooklin, Maine,  
173.  
Wormwood, 191.  
Wyneberry, 24, 36.  
Xanthosma sagittaeifolium, 48.  
Xylosteum Solonis, 210; villosum,  
210.  
Xyridaceae, 6.  
Xyris, 6; caroliniana, 6, 108; flexu-  
osa, 6; Jupicai, 6; Smalliana, 6.  
Yew, American, 176; Tree, 23.  
Zannichellia, 12; palustris, 12, an  
additional Record, 12.  
Zizania, 12, 17, 25, 26, 134; aquatica,  
110, 134.







# A TEXTBOOK OF BOTANY

FOR COLLEGES AND UNIVERSITIES

By JOHN MERLE COULTER, CHARLES REID BARNES, and HENRY CHANDLER COWLES, Members of the Botanical Staff of the University of Chicago

(Vol. I.) Morphology and Physiology. Price, \$2.00. (Vol. II.) Ecology. Price, \$2.00  
(Ready in November)

THESE volumes contain selected material, general statements which are not confused by exceptions, and a minimum of terminology. In the part on Morphology, the evolution of the plant kingdom has determined the selection of material and of structures. Physiology is presented in its modern aspect, the explanation of plant behavior being in terms of chemistry and physics, so far as present knowledge permits. The comparatively new subject of Ecology is organized for the first time as a college text. The work is strictly modern in its point of view. All antiquated conceptions have been carefully discarded. The logical presentation, the orderly arrangement, the subordination of details to principles, the omission of sterile facts, and the excellent original illustrations are other important features.

---

AMERICAN BOOK COMPANY

NEW YORK

CINCINNATI

CHICAGO

BOSTON

---

## HOME GROWN LILIES.

Fresh from Beds. Wild Flowers, Hardy plants of all kinds.  
Send for catalogue.

F. H. HORSFORD, Charlotte, Vt.

---

## BIRDS OF MAINE

is the latest and most complete work on northeastern bird life. It is an illustrated work of 693 pages and contains descriptions of the plumage and full accounts of the nests, eggs, habits and general home life of 327 species of birds. As a book for the amateur or for the scientific student of bird life in northeastern America it is unexcelled. Sent prepaid on receipt of price, \$3.50. Address all orders to

ORA WILLIS KNIGHT, 84 Forest Avenue, Bangor, Maine.

---

CAMBRIDGE BOTANICAL SUPPLY COMPANY,  
WAVERLEY, MASS.

BOTANICAL SUPPLIES OF EVERY DESCRIPTION.

Samples of Driers and Mounting Papers sent on request.

ASK FOR NEW CATALOG. NO. 91.

STANDARD MATERIAL. IMMEDIATE SHIPMENT.

Physiological Instruments. How do Plants Work?